

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**Claim 1 (Canceled)** An intravascular flow modifier (IFM) for use in a vessel, the vessel having an interior surface, the IFM comprising:

an outer layer formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said outer layer, said outer layer being secured in the vessel by at least some of said helical loops pressing against a portion of the interior surface of the vessel; and

an inner layer formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said inner layer, at least a portion of said outer layer surrounding at least a portion of said inner layer so that at least some of said loops of said outer layer overlap and contact at least some of said loops of said inner layer.

**Claim 2 (Canceled)** The IFM of claim 1, wherein said strand of said outer layer and said inner layer is a continuous strand.

**Claim 3 (Canceled)** The IFM of claim 2, wherein said continuous strand is made of a biocompatible material.

**Claim 4 (Canceled)** The IFM of claim 1, wherein said strands of said outer and inner layers comprises a high shape memory alloy.

**Claim 5 (Canceled)** The IFM of claim 4, wherein said strands are made of a Nitinol alloy.

**Claim 6 (Canceled)** The IFM of claim 1, wherein said strand of said outer and inner layers have a cross-section, the cross-section being one of circular, oval, rectangle, and triangular.

Claim 7 (Canceled) The IFM of claim 1, wherein said second end of said outer layer is anchored proximal to said first end of said inner layer.

Claim 8 (Canceled) The IFM of claim 2, wherein said first end of said outer layer is attached to said second end of said inner layer such that said continuous strand forms a loop.

Claim 9 (Canceled) The IFM of claim 1, wherein said second end of said outer layer is joined to said first end of said inner layer.

Claim 10 (Canceled) The IFM of claim 1, wherein said first end of said outer layer includes means for inhibiting said strand from penetrating through the interior surface of the vessel.

Claim 11 (Canceled) The IFM of claim 10, wherein said inhibiting means includes a loop on said first end of said strand.

Claim 12 (Canceled) The IFM of claim 1, wherein said second end of said inner layer includes means for inhibiting said strand from penetrating through the interior surface of the vessel.

Claim 13 (Canceled) The IFM of claim 12, wherein said inhibiting means includes a loop on said second end of said strand.

Claim 14 (Canceled) The IFM of claim 1, wherein said first end of said outer layer and said second end of said inner layer are distal ends relative to an insertion point into the vessel.

Claim 15 (Canceled) The IFM of claim 1, wherein said second end of said outer layer and said first end of said inner layer are proximal ends relative to an insertion point into the vessel.

Claim 16 (Canceled) The IFM of claim 1, wherein said helical loops of said outer and inner layers are substantially circular.

Claim 17 (Canceled) The IFM of claim 1, wherein both said helical loops of said outer and inner layers wind in a predetermined direction.

Claim 18 (Canceled) The IFM of claim 1, wherein the number of said helical loops of said outer layer is N, where N is at least two.

Claim 19 (Canceled) The IFM of claim 1, wherein the number of said outer loops of said inner layer is M, where M is at least two.

Claim 20 (Canceled) The IFM of claim 1, wherein said outer layer is divided into at least a first end portion, a middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being smaller than the pitch of said first end and second end portions.

Claim 21 (Canceled) The IFM of claim 20, wherein the pitch of said first end portion provides a gap between said helical loops of between 3 and 7 mm, the pitch of said middle portion provides a gap between said helical loops of between 0.5 and 3 mm, and the pitch of said second end portion provides a gap between said helical loops of between 3 and 7 mm.

Claim 22 (Canceled) The IFM of claim 20, wherein said strand of said outer layer has a diameter, the diameter of said strand of said first end and second end portions is smaller than the diameter of said strand of said middle portion.

Claim 23 (Canceled) The IFM of claim 22, wherein the diameter of said strand of said outer layer is no greater than .020 inches.

Claim 24 (Canceled) The IFM of claim 23, wherein the diameter of said strand of said outer layer comprising said first end and second end portions is between .001 and .002 inches, and the diameter of said strand comprising said middle portion is between .003 and .004 inches.

Claim 25 (Canceled) The IFM of claim 1, wherein said outer layer is divided into a first end portion, a middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being larger than the pitch of said first end and second end portions.

Claim 26 (Canceled) The IFM of claim 1, wherein said inner layer is divided into at least a first end portion, a middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being smaller than the pitch of said first end and second end portions.

Claim 27 (Canceled) The IFM of claim 26, wherein the pitch of said first end portion provides a gap between said helical loops of between 3 and 7 mm, the pitch of said middle portion provides a gap between said helical loops of between 0.5 and 3 mm, and the pitch of said second end portion provides a gap between said helical loops of between 3 and 7 mm.

Claim 28 (Canceled) The IFM of claim 26, wherein said strand of said inner layer has a diameter, the diameter of said strand of said first end and second end portions is smaller than the diameter of said strand of said middle portion.

Claim 29 (Canceled) The IFM of claim 28, wherein the diameter of said strand of said inner layer is no greater than .020 inches.

Claim 30 (Canceled) The IFM of claim 29, wherein the diameter of said strand of said inner layer comprising said first end and second end portions is between .001 and .002 inches, and the diameter of said strand comprising said middle portion is between .003 and .004 inches.

Claim 31 (Canceled) The IFM of claim 26, wherein said helical loops of said inner layer have a substantially constant inner diameter.

Claim 32 (Canceled) The IFM of claim 1, wherein said inner layer is divided into a first end portion, a middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, said pitch of said middle portion being larger than the pitch of said first end and second end portions.

Claim 33 (Canceled) The IFM of claim 1, further including a second inner layer formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said second inner layer, at least a portion of said inner layer surrounding at least a portion of said second inner layer so that at least some of said loops of said inner layer overlap and contact at least some of said loops of the second inner layer.

Claim 34 (Canceled) An intravascular flow modifier (IFM) for use in a vessel, the vessel having an interior surface, the IFM comprising:

a continuous length of strand formed as a longitudinally oriented coil surrounding another longitudinally oriented coil, said coils forming an outer, layer of adjacent helical loops surrounding an inner layer of adjacent helical loops, said outer

layer urging against a portion of the interior surface of the vessel, said helical loops of said inner layer urging against said loops of said outer layer at crossing points.

Claim 35 (Canceled) An intravascular flow modifier (IFM) for use in a vessel, the vessel having an interior surface, the IFM comprising:

an outer layer formed of a strand having a first end, a second end opposite said first end, and a longitudinally oriented coil of adjacent helical loops between said first and second ends, said outer layer being secured in the vessel by at least some of said helical loops pressing against a portion of the interior surface of the vessel; and

an inner layer formed of a strand having a first end, a second end opposite said first end, and a longitudinally oriented coil of adjacent loops between said first and second ends, at least a portion of said outer layer surrounding at least a portion of said inner layer so that at least some of said loops of said outer layer overlap and contact at least some of said loops of said inner layer,

said strand of said outer and inner layers being a continuous strand formed of a high shape memory alloy and having a cross-section, the cross-section being one of circular, oval, rectangle, and triangular, said helical loops of said outer and inner layers being substantially circular, said second end of said outer layers joining said first end of said inner layer, said first end of said outer layer and said second end of said inner layer being distal ends relative to an insertion point into the vessel, said second end of said outer layer and said first end of said inner layer being proximal ends relative to an insertion point into the vessel, said helical loops of said outer and inner layers wind in a predetermined direction.

Claim 36 (Canceled) An intracranial intravascular flow modifier (IFM) for use in a cranial vessel, the vessel having an interior surface, the IFM comprising:

an outer layer formed of a a strand having a first end, a second end opposite said first end, and a longitudinally oriented coil of adjacent helical loops between said

first and second ends, said outer layer being secured in the vessel by at least some of said helical loops pressing against a portion of the interior surface of the vessel; and

an inner layer formed of a strand having a first end, a second end opposite said first end, and a longitudinally oriented coil of adjacent helical loops between said first and second ends, at least a portion of said outer layer surrounding at least a portion of said inner layer so that at least some of said loops of said outer layer overlap and contact at least some of said loops of said inner layer,

said strand of said outer and inner layers being a continuous strand formed of a high shape memory alloy, said helical loops of said outer and inner layers being substantially circular, said second end of said outer layer joining said first end of said inner layer, said first end of said outer layer and second end of said inner layer being distal ends relative to an insertion point into the vessel, said second end of said outer layer and first end of said inner layer being proximal ends relative to an insertion point into the vessel, said IFM having an outside diameter of between about 1.5 and 12 mm.

Claim 37 (Canceled) The IFM of claim 36, wherein said outer layer is divided into a first end portion, a middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being smaller than the pitch of said first end and second end portions, and said inner layer is divided into a first end portion, a middle portion, and a second end portion along the longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being smaller than the pitch of said first end and second end portions.

Claim 38 (Canceled) An intravascular flow modifier (IFM) for use in a vessel, the vessel having an interior surface having a defect, the IFM comprising:

at least one outer helical loop formed of a strand, said outer loop being secured in the vessel by at least some portion of said helical loop pressing against a portion of the interior surface of the vessel; and

at least one inner helical loop formed of a strand, at least some portion of said outer helical loop surrounding at least a portion of said inner helical loop so that at least some of said outer helical loop overlaps and contacts at least some of said inner helical loop.

Claim 39 (Canceled) The IFM of claim 38, wherein said outer helical loop overlaps and contacts said inner helical loop at a crossing point, at least one crossing point being adjacent the defect in the interior of the vessel.

Claim 40 (Canceled) An assembly for an intravascular repair of a defect of a body vessel, the vessel having an interior surface, the assembly comprising:

an elongated first catheter;

an IFM having a deployed configuration when in the vessel at a site of the defect and a pre-deployed configuration for movement through said first catheter;

said IFM including an outer layer formed of a strand, said adjacent helical loops extending between a first end and a second end of said outer layer, once deployed said outer layer being secured in the vessel by at least some of said loops urging against a portion of the interior surface of the vessel, and an inner layer, formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said inner layer, once deployed in the vessel at the site of the defect at least a portion of said outer layer surrounding at least a portion of said inner layer so that at least some of said loops of said outer flayer overlap and contact at least some of said loops of said inner layer; and



said first catheter having a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to the pre-deployed configuration of said IFM such that said IFM is axially slidable therethrough.

Claim 41 (Canceled) The assembly of claim 40, further comprising a second catheter having a distal end, a proximal end, and a central lumen extending axially therethrough, said lumen of said second catheter having a size and shape complementary to said first catheter such that said first catheter is axially slidable therein, and such that at least a portion of said distal end of said first catheter can be inserted into said lumen of said second catheter at said proximal end and passes through said lumen of said second catheter and exits said second catheter at said distal end.

Claim 42 (Canceled) The assembly of claim 41, further comprising a third catheter having a distal end, a proximal end, and a central lumen extending axially therethrough, said lumen of said third catheter having a size and shape complementary to said second catheter such that said second catheter is axially slidable therein, and such that at least a portion of said distal end of said second catheter can be inserted into said lumen of said third catheter at said proximal end and passes through said lumen of said third catheter and exits said third catheter at said distal end.

Claim 43 (Canceled) The assembly of claim 40, wherein the vessel is a cranial vessel, and said IFM has a deployed diameter of between about 1.5 and 12 mm.

Claim 44 (Canceled) The assembly of claim 40, wherein said strand of said outer, and inner layers has a diameter of no greater than about .020 inches.

Claim 45 (Canceled) The assembly of claim 40, wherein said first catheter has an outside diameter of between about 0.10 and about .014 inches.

Claim 46 (Canceled) The assembly of claim 40, wherein said first catheter has an inside diameter of between about .004 and about .006 inches.

Claim 47 (Canceled) The assembly of claim 41, wherein said second catheter, has an outside diameter of approximately 1 mm.

Claim 48 (Canceled) The assembly of claim 41, wherein said second catheter has an inside diameter of at least approximately .022 inches.

Claim 49 (Canceled) An assembly for an intravascular repair of a defect of a body vessel, the vessel having an interior surface, the assembly comprising:

an IFM having a deployed configuration when in the vessel at a site of the defect and a pre-deployed configuration for movement through the vessel towards the site of the defect;

said IFM including an outer layer formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said outer layer, once deployed said outer layer being secured in the vessel by at least some of said loops urging against a portion of the interior surface of the vessel, and an inner layer formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said inner layer, once deployed in the vessel at the site of the defect at least a portion of said outer layer surrounding at least a portion of said inner layer so that at least some of said loops of said outer layer overlap and contact at least some of said loops of said inner layer; and

a means for moving and maintaining said IFM when in the pre-deployed configuration, the outer and inner layers of said IFM taking the deployed configuration when the moving and maintaining means is no longer applied thereto.

Claim 50 (Canceled) The IFM of claim 49, wherein the moving and maintaining means comprises an elongated first catheter having a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to the respective size and shape of said IFM when in the pre-deployed configuration such that said outer and inner layers are axially slidable therein.

Claim 51 (Canceled) The IFM of claim 49, further comprising means for disposing said IFM within the vessel.

Claim 52 (Canceled) The IFM of claim 51, Wherein the disposing means comprises:

an elongated first catheter having a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to the respective size and shape of said IFM when in the pre-deployed configuration such that said IFM is axially slidable therein; and

an elongated second catheter having a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to said first catheter such that said first catheter is axially slidable therein, and such that at least a portion of said distal end of said first catheter can be inserted into said lumen of said second catheter at said proximal end and passes through said lumen of said second catheter and exits said, second catheter at said distal end.

Claim 53 (Canceled) The IFM of claim 49, and further comprising means for selectively varying the gap between said adjacent helical loops of said outer and inner layers.

Claim 54 (Canceled) The IFM of claim 53, wherein said selectively varying means comprises:

an elongated first catheter having a proximal end and distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to the respective size and shape of said IFM when in the pre-deployed configuration such that said IFM is axially slidable therein;

an elongated second catheter having a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to said first catheter such that said first catheter is axially slidable therein, and such that at least a portion of said distal end of said first catheter can be inserted into said lumen of said second catheter at said proximal end and passes through said lumen of said second catheter and exits said second catheter at said distal end; and

means for controlling axial movement of said IFM when in the pre-deployed configuration through said first catheter and out of said distal end of said first catheter.

Claim 55 (Canceled) The IFM of claim 54, wherein said controlling means includes means for controlling the axial movement of said IFM and said first catheter.

Claim 56 (Canceled) An assembly for an intravascular repair of a defect of a cranial vessel, the vessel having an interior surface, the assembly comprising:

an elongated first catheter;

an IFM having a deployed configuration when in the vessel at a site of the defect and a pre-deployed configuration for movement through said first catheter;

said IFM including an outer layer formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said outer layer, once deployed said outer layer being secured in the vessel by at least some of said loops urging against a portion of said interior surface of the vessel, and an inner layer formed of a strand, said strand being configured as a longitudinally oriented coil of adjacent helical loops extending between a first end and a second end of said inner layer, once deployed in the vessel at the site of the defect at least a portion of said outer layer surrounding at least a portion of said inner layer so that at least some of said loops of said outer layer overlap and contact at least some of said loops of said inner layer, said IFM having a deployed diameter of between about 1.5 and about 12 mm;

said first catheter having a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having an inside diameter of between about .004 and about .006 inches to receive the pre-deployed configuration of said IFM such that said IFM is axially slidable therethrough; and

a second catheter having a distal end, a proximal end, and a central lumen extending axially therethrough, said lumen of said second catheter having an inside diameter of at least about .022 inches to receive said first catheter such that said first catheter is axially slidable therein, and such that at least a portion of said distal end of said first catheter can be inserted into said lumen of said second catheter at said proximal end and passes through said lumen of said second catheter anscular flow modi pre-selected segment of a vessel, said IFM having a first portion comprising an outer layer of strand and a second portion comprising an inner layer of strand, the vessel having an interior surface, the method comprising the steps of:

moving said IFM through a catheter up to the pre-selected segment of the vessel;

manipulating at least one of said outer layer of strand and said catheter to deploy said outer layer of strand in the pre-selected segment of vessel as a longitudinally oriented coil of adjacent helical loops; and

manipulating at least one of said inner layer of strand and said catheter to deploy said inner layer of strand in the pre-selected segment of vessel as a longitudinally oriented coil of adjacent helical loops within said first portion of said IFM.

Claim 58 (Canceled) The method of claim 57, wherein the step of moving includes the step of insulating said IFM within said catheter.

Claim 59 (Canceled) The method of claim 57, further comprising the step of inserting said IFM into said catheter prior to the step of moving.

Claim 60 (Canceled) The method of claim 59, further comprising the step of elongating said IFM prior to inserting said IFM into said catheter.

Claim 61 (Canceled) The method of claim 60, wherein the step of elongating said IFM includes the step of straightening said IFM to a substantially linear configuration.

Claim 62 (Canceled) The method of claim 60, wherein said catheter used in the step of moving has a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to said IFM when elongated such that said first and second portions of said IFM are axially slidable therethrough.

Claim 63 (Canceled) The method of claim 59, wherein said catheter used in the step of inserting includes an elongated micro-catheter having a proximal end, a distal end, and a central lumen extending axially therethrough, said lumen having a size and shape complementary to said IFM when elongated such that said IFM is axially slidable therethrough, and the step of inserting further comprises the step of providing an elongated guide catheter having a distal end, a proximal end, and a central lumen extending axially therethrough, said guide catheter being positioned in the vessel with said distal end of said guide catheter being oriented near the pre-selected segment of the vessel, said lumen of said guide catheter having a size and shape complementary to said micro-catheter such that said micro-catheter is axially slidable therethrough.

Claim 64 (Canceled) The- method of claim 63, further including the step of inserting at least a portion of said distal end of said micro-catheter into said lumen of said guide catheter at said proximal end and passing through said lumen of said guide catheter and exiting said guide catheter at said distal end prior to the step of moving said IFM.

Claim 65 (Canceled) The method of claim 64, wherein the step of inserting further comprises the step of providing an elongated angiographic catheter having a distal end, a proximal end, and a central lumen extending axially therethrough, said angiographic catheter being positioned in the vessel with said distal end of said angiographic catheter being oriented closer to an insertion point into the vessel than said distal end of said guide catheter, said lumen of said angiographic catheter having a size and shape complementary to said guide catheter such that said guide catheter is axially slidable therethrough.

Claim 66 (Canceled) The method of claim 65, further including the step of inserting at least a portion of said distal end of said guide catheter into said lumen of said angiographic

catheter at said proximal end and passing through said lumen of said angiographic catheter and exiting said angiographic catheter at said distal end prior to the step of moving said IFM.

Claim 67 (Canceled) The method of claim 66, further comprising the step of inserting said angiographic catheter into the vessel before inserting said guide catheter containing said micro-catheter into the vessel.

Claim 68 (Canceled) The method of claim 67, further comprising the steps of halting the advancement of said angiographic catheter into the vessel and continuing to advance said guide catheter containing said micro-catheter into the vessel.

Claim 69 (Canceled) The method of claim 68, further comprising the steps of halting the advancement of said guide catheter into the vessel and continuing to advance said micro-catheter into the vessel.

Claim 70 (Canceled) The method of claim 64, wherein the steps of manipulating include the step of selectively varying the spacing between said adjacent helix loops of said outer and inner layers, respectively.

Claim 71 (Canceled) The method of claim 60, further comprising the step of expanding said IFM substantially to a pre-elongated diameter during the steps of manipulating.

Claim 72 (Canceled) The method of claim 71, wherein the step of expanding said IFM includes the step of warming said strand of said outer layer and said strand of said inner layer.



Claim 73 (Canceled) The method of claim 57, wherein the step of manipulating at least one of said outer layer and said catheter includes the step of providing said outer layer with a number of loops where the number is at least two.

Claim 74 (Canceled) The method of claim 57, wherein the step of manipulating at least one of said outer layer and said catheter includes the step of providing said outer layer with a single loop.

Claim 75 (Canceled) The method of claim 57, wherein the step of manipulating at least one of said inner layer and said catheter includes the step of providing said inner layer with a number of loops where the number is at least two.

Claim 76 (Canceled) The method of claim 57, wherein the step of manipulating at least one of said inner layer and said catheter includes the step of providing said inner layer with a single loop.

Claim 77 (Canceled) The method of claim 57, wherein the step of manipulating said first portion of said IFM includes the step of feeding said outer layer out of said catheter to produce a first end portion middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being smaller than the pitch of said first end and second end portions.

Claim 78 (Canceled) The method of claim 77, wherein the step of feeding includes the step of winding the pitch of said first end portion to provide a gap between said loops of between 3 and 7 mm, the pitch of said middle portion to provide a gap between said loops of between

0.5 and 3 mm, and the pitch of said second end portion to provide a gap between said loops of between 3 and 7 mm.

Claim 79 (Canceled) The method of claim 57, wherein the step of manipulating said first portion of said IFM includes the step of pushing said first portion out of said catheter and into the pre-selected segment said catheter having a proximal end and a distal end relative to an insertion point into the vessel.

Claim 80 (Canceled) The method of claim 79, wherein the step of pushing includes pushing said first portion out of said distal end of said catheter while pulling said catheter towards the insertion point into the vessel.

Claim 81 (Canceled) The method of claim 79, wherein the step of pushing includes pushing said first portion out of said distal end of said catheter at a predetermined rate while pushing said catheter towards the pre-selected segment of the vessel at a rate slower than the predetermined rate of said second portion.

Claim 82 (Canceled) The method of claim 57, wherein the step of manipulating said second portion of said IFM includes the step of feeding said inner layer out of said catheter to produce a first end portion a middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being smaller than the pitch of said first end and second end portions.

Claim 83 (Canceled) The method of claim 82, wherein the step of feeding includes the step of winding the pitch of said first end portion to provide a gap between said loops of between 3 and 7 mm, the pitch of said middle portion to provide a gap between said loops of between

0.5 and 3 mm, and the pitch of said second end portion to provide a gap between said loops of between 3 and 7 mm.

Claim 84 (Canceled) The method of claim 57, wherein the step of manipulating said second portion of said IFM includes the step of pushing said second portion out of said catheter and into the pre-selected segment, said catheter having a proximal end and a distal end relative to an insertion point into the vessel.

Claim 85 (Canceled) The method of claim 84, wherein the step of pushing includes pushing said second portion out of said distal end of said catheter at a predetermined rate while pushing said catheter towards the pre-selected segment of the vessel at a rate slower than the predetermined rate of said second portion.

Claim 86 (Canceled) The method of claim 84, wherein the step of pushing includes pushing said second portion out of said distal end of said catheter while pulling said catheter towards the insertion point into the vessel.

Claim 87 (Canceled) A method of forming an IFM at a pre-selected segment of a vessel, the vessel having an interior surface, the method comprising the steps of:

straightening said IFM to a substantially linear configuration;

providing an angiographic catheter, a guide catheter, and a micro-catheter, each of said catheters having a distal end, a proximal end, and a central lumen extending axially therethrough;

inserting said angiographic catheter into the vessel;

inserting said micro-catheter into said guide catheter, and said guide catheter into said angiographic catheter;

inserting said IFM into said micro-catheter;

positioning said distal end of said angiographic catheter at a predetermined location in the vessel proximal to the preselected segment of the vessel;

advancing at least a portion of said distal end of said guide catheter through said angiographic catheter and exiting said angiographic catheter at said distal end;

positioning said guide catheter in the vessel with the distal end of said guide catheter being oriented between the pre-selected segment of the vessel and said distal end of said angiographic catheter;

advancing at least a portion of said distal end of said micro-catheter through said guide catheter and exiting said guide catheter at said distal end;

moving said IFM through said micro-catheter up to the pre-selected segment of the vessel;

manipulating at least one of said outer layer of strand and said catheter to deploy said outer layer of strand in the preselected segment of vessel as a longitudinally oriented coil of adjacent helical loops; and

manipulating at least one of said inner layer of strand and said catheter to deploy said inner layer of strand in the preselected segment of vessel as a longitudinally oriented coil of adjacent helical loops within said first portion of said IFM.

Claim 88 (Canceled) The method of claim 87, wherein the step of manipulating said first portion of said IFM includes the step of pushing said first portion out of said catheter and into the pre-selected segment, said catheter having a proximal end and a distal end relative to an insertion point into the vessel.

Claim 89 (Canceled) The method of claim 88, wherein the step of pushing includes pushing said first portion out of said distal end of said catheter while pulling said catheter towards the insertion point into the vessel.

Claim 90 (Canceled) The method of claim 88, wherein the step of pushing includes pushing said first portion out of said distal end of said catheter at a predetermined rate while pushing said catheter towards the pre-selected segment of the vessel at a rate slower than the predetermined rate of said second portion.

Claim 91 (Canceled) The method of claim 87, wherein the step of manipulating said second portion of said IFM includes the step of pushing said second portion out of said catheter and into the pre-selected segment, said catheter having a proximal end and a distal end relative to an insertion point into the vessel.

Claim 92 (Canceled) The method of claim 91, wherein the step of pushing includes pushing said second portion out of said distal end of said catheter at a predetermined rate while pushing said catheter towards the pre-selected segment of the vessel at a rate slower than the predetermined rate of said second portion.

Claim 93 (Canceled) The method of claim 91, wherein the step of pushing includes pushing said second portion out of said distal end of said catheter while pulling said catheter towards the insertion point into the vessel.

Claim 94 (Canceled) A method of forming an IFM at a pre-selected segment of a vessel, the vessel having an interior surface, the method comprising the steps of:

straightening said IFM to a substantially linear configuration;

providing a guide catheter and a micro-catheter, each of said catheters having a distal end, a proximal end, and a central lumen extending axially therethrough;

inserting said micro-catheter into said guide catheter;

inserting said guide catheter into the vessel;

inserting said IFM into said micro-catheter;  
positioning said guide catheter in the vessel with the distal end of said guide catheter being oriented between the pre-selected segment of the vessel and an insertion point into the vessel;  
advancing at least a portion of said distal end of said micro-catheter through said guide catheter and exiting said guide catheter at said distal end;  
moving said IFM through said micro-catheter up to the pre-selected segment of the vessel; and  
manipulating said layer of strand and said catheter to deploy said outer layer of strand in the pre-selected segment of vessel as a longitudinally oriented coil of adjacent helical loops.

Claim 95 (Canceled) The method of claim 94, further comprising the steps of halting the advancement of said guide catheter into the vessel and continuing to advance said micro-catheter into the vessel.

Claim 96 (Canceled) The method of claim 94, wherein the step of manipulating includes the step of selectively varying the spacing between said adjacent helix loops of said layer.

Claim 97 (Canceled) The method of claim 94, further comprising the step of expanding said IFM substantially to a pre-elongated diameter during the step of manipulating.

Claim 98 (Canceled) The method of claim 94, wherein the step of manipulating includes the step of feeding said layer of strand out of said micro-catheter to produce a first end portion, a middle portion, and a second end portion along said longitudinally oriented coil, said first end, middle, and second end portions each having a pitch, the pitch of said middle portion being smaller than the pitch of said first end and second end portions.

Claim 99 (Canceled) The method of claim 94, wherein the step of manipulating includes the step of pushing said layer of strand out of said micro-catheter and into the pre-selected segment, said micro-catheter having a proximal end and a distal end relative to an insertion point into the vessel.

Claim 100 (Canceled) The method of claim 99, wherein the step of pushing includes pushing said layer of strand out of said distal end of said microcatheter at a predetermined rate while pushing said micro-catheter towards the pre-selected segment of the vessel at a rate slower than the predetermined rate of said layer of strand.

Claim 101 (Canceled) The method of claim 99, wherein the step of pushing includes pushing said layer of strand out of said distal end of said catheter while pulling said micro-catheter towards the insertion point into the vessel.

Claim 102 (Canceled) Apparatus for implantation in a blood vessel that has a vessel wall, a vessel lumen defined by the vessel wall and an aneurysm formed in the vessel wall in communication with the vessel lumen, said apparatus comprising:

an intravascular member that has a collapsed configuration wherein it is in the form of an elongate strand member of a first diameter and an expanded configuration wherein the elongate strand member assumes a curved configuration which generally defines a tubular shape of a second diameter, said intravascular member being advanceable while in its collapsed configuration to a position within the lumen of the blood vessel adjacent to the aneurysm and then expandable to its expanded configuration wherein it engages the vessel wall and is thereby held in substantially fixed position within the vessel lumen adjacent to the aneurysm, and wherein the intravascular member defines a blood flow channel that permits blood to flow through the intravascular member while it is positioned in the blood vessel; and,

an embolus member that is transluminally advanceable through the lumen of the blood vessel and placeable within the aneurysm;  
the intravascular member being operative to prevent the embolus member

Claim 103 (Canceled) Apparatus according to Claim 102 wherein the intravascular member self expands from its collapsed configuration to its expanded configuration.

Claim 104 (Canceled) Apparatus according to Claim 103 wherein the intravascular member self expands from its radially collapsed configuration to its radially expanded configuration.

Claim 105 (Canceled) Apparatus according to Claim 102 wherein the intravascular member comprises a helical coil when in its expanded configuration.

Claim 106 (Canceled) Apparatus according to Claim 102 wherein the intravascular member comprises an outer layer and an inner layer when in its expanded configuration.

Claim 107 (Canceled) Apparatus according to Claim 106 wherein the outer layer and the inner layer are formed of a continuous strand.

Claim 108 (Canceled) Apparatus according to Claim 102 wherein the intravascular member is formed of a shape memory alloy.

Claim 109 (Canceled) Apparatus according to Claim 102 wherein the embolus member comprises a thrombogenic member.

Claim 110 (Canceled) A method for treating a mammalian patient who has a defect in the wall of a blood vessel that has a lumen and a wall, said method comprising the steps of:

- A. providing a first catheter that has a lumen extending therethrough, a second catheter that has a lumen extending therethrough, a third catheter that has a lumen extending therethrough and an intravascular member that is disposed within the lumen of the third catheter while in a collapsed configuration of a first diameter, said intravascular member being subsequently advanceable out of the lumen of the third;
- B. placing the first catheter at a first position within the patient's vasculature;
- C. advancing the second catheter through the lumen of the first catheter and to a second position within the patient's vasculature;



- D. advancing the third catheter through the lumen of the second catheter to a third position within the patient's vasculature adjacent the vessel wall defect;
- E. while the first, second and third catheters are in their respective first, second and third positions, advancing the intravascular member out of the lumen of the third catheter such that the intravascular member assumes its radially expanded configuration and engages the wall of the blood vessel so as to be held in substantially fixed position within the vessel lumen adjacent to the vessel wall defect and so that it provides a blood flow channel to permit blood to flow past the intravascular member when it is positioned in the blood vessel;
- F. providing an embolus member sized to fit within the vessel wall defect; and,
- G. positioning the embolus member within the vessel wall defect such that the intravascular member retains the embolus member within the vessel wall defect.

Claim 112 (Canceled) A method according to Claim 110 wherein Step E is performed after Step C.

Claim 113 (Canceled) A method according to Claim 112 wherein Step E comprises:

- i positioning a delivery catheter having a distal end within the intravascular member after it has been radially expanded in Step C;
- ii causing the distal end of the delivery catheter to advance through a portion of the intravascular member and into the vessel wall defect;
- iii delivering the embolus member out of the distal end of the delivery catheter and into the vessel wall defect; and,
- iv removing the delivery catheter, leaving the embolus member within the vessel wall defect with the intravascular member preventing the embolus member from escaping from the vessel wall defect into the lumen of the blood vessel.

Claim 114 (Canceled) A method according to Claim 113 wherein the intravascular member comprises a helical coil having a plurality of convolutions with spaces therebetween and wherein step ii comprises advancing the distal end of the delivery catheter through a space between two adjacent convolutions of the helical coil and into the vessel wall defect.

Claim 115 (Canceled) A method according to Claim 110 wherein the vessel wall defect is an aneurysm and wherein Step E comprises positioning the embolus member within the aneurysm.

Claim 116 (Canceled) A method according to Claim 115 wherein the aneurysm is a wide mouthed aneurysm and wherein Step E comprises delivering the embolus member through the mouth of the aneurysm and into the aneurysm sac.

Claim 117 (Canceled) A method according to Claim 115 wherein the aneurysm is a cerebral aneurysm.

Claim 118 (Canceled) A method according to Claim 110 wherein the embolic member delivered in Step E comprises a thrombogenic member.

Claim 119 (Canceled) An intravascular flow modifier apparatus for treating a defect in a blood vessel wall into which blood flows from the lumen of the blood vessel, said apparatus comprising:

at least one biocompatible member that is initially disposable in a collapsed substantially linear configuration and is thereafter transitionable to an expanded configuration, when in its expanded configuration said at least one member defining a blood flow channel and a flow modification region, the blood flow channel being defined by a plurality of coils with at least one of the coils disposed within at least one of the other coils;

said intravascular flow modifier apparatus being deliverable, while in its collapsed substantially linear configuration, through the blood vessel lumen to a location within the blood vessel lumen adjacent to the vessel wall defect and said apparatus being thereafter transitionable to its expanded configuration such that blood flowing through the lumen of the blood vessel may flow through the blood flow channel of the apparatus and the flow modifying region of the apparatus is positioned adjacent to the vessel wall defect so as to modify blood flow from the lumen of the blood vessel into the vessel wall defect.

Claim 120 (Canceled) An apparatus according to Claim 119 wherein the biocompatible member self-expands from its collapsed substantially linear configuration to its expanded configuration.

Claim 121 (Canceled) An apparatus according to Claim 120 wherein the biocompatible member self-expands from its radially collapsed configuration to its radially expanded configuration.

Claim 122 (Canceled) An apparatus according to Claim 119 wherein the biocompatible member comprises a helical coil.

Claim 123 (Canceled) An apparatus according to Claim 119 wherein the biocompatible member comprises an outer layer and an inner layer.

Claim 124 (Canceled) An apparatus according to Claim 123 wherein the outer layer and the inner layer are formed of a continuous strand.

Claim 125 (Canceled) An apparatus according to Claim 119 wherein the biocompatible member is formed of a shape memory alloy.

Claim 126 (Canceled) An apparatus according to Claim 120 wherein the biocompatible member is formed of a shape memory alloy.

Claim 127 (Canceled) A method for treating a defect in a wall of a blood vessel that has a lumen and a wall, the method comprising the steps of:

- A. providing an apparatus that i) is initially disposable in a collapsed substantially linear configuration and is thereafter transitionable to an expanded configuration and ii) when in its expanded configuration comprises a blood flow channel and a flow modification region, the blood flow channel being defined by a plurality of coils with at least one of the coils disposed within at least one of the other coils;
- B. positioning the apparatus, while in its collapsed configuration, within the lumen of the blood vessel adjacent to the defect;
- C. positioning and expanding the apparatus to its expanded configuration such that i) the apparatus engages the wall of the blood vessel to hold the apparatus in a substantially stationary position within the blood vessel lumen, ii) blood flowing through the blood vessel lumen passes through the blood flow channel

of the apparatus and iii) the flow modifying region of the apparatus is positioned relative to the defect to divert blood flow from the defect.

Claim 128 (Canceled) A method according to Claim 127 wherein the vessel wall defect is an aneurysm, Step B comprises positioning the apparatus within the blood vessel lumen adjacent to the aneurysm and Step C comprises positioning and expanding the apparatus such that the apparatus modifies blood flow in a way that strengthens the blood vessel with the aneurysm.

Claim 129 (Canceled) A method according to Claim 128 wherein the aneurysm is a wide mouthed aneurysm and Step C comprises positioning and expanding the apparatus such that the flow modifying region is next to the mouth of the aneurysm.

Claim 130 (Canceled) A method according to Claim 128 wherein the aneurysm is a cerebral aneurysm.

Claim 131 (Canceled) A system for implantation of an intravascular member within the lumen of a blood vessel, said system comprising:

an elongate, flexible delivery catheter having a distal end, a lumen extending longitudinally therethrough and terminating in a distal end opening, said delivery catheter being advanceable the blood vessel lumen wherein the intravascular member is to be implanted;

an intravascular member which has a collapsed configuration and an expanded configuration wherein it defines a flow channel therethrough, said intravascular member being disposed within the lumen of the delivery catheter while in its collapsed configuration;

an advancer apparatus for advancing the intravascular member out of the distal end opening lumen of the third catheter, said intravascular member being connected to the advancer apparatus by way of a releasable connection,

said advancer apparatus being useable to advance the intravascular member out of the distal end opening of the catheter such that the intravascular member will transition to its expanded configuration within the blood vessel lumen such that blood flowing through the blood vessel lumen will flow through the flow channel of the intravascular member, while the

intravascular member remains connected to the advancer apparatus by way of said releasable connection, said releasable connection being thereafter volitionally severable such that the delivery catheter and advancer apparatus may be removed from the blood vessel lumen leaving the expanded intravascular member implanted in said blood vessel lumen.

Claim 132 (Canceled) A system according to Claim 131 wherein the intravascular member comprises a strand that is substantially linear when said collapsed configuration and substantially curvilinear when in said expanded configuration.

Claim 133 (Canceled) A system according to Claim 132 wherein the strand forms a helix when in said expanded configuration.

Claim 134 (Canceled) A system according to Claim 131 further comprising apparatus for releasing the releasable connection.

Claim 135 (Canceled) A system according to Claim 134 wherein the apparatus for releasing the releasable connection comprises a ball and claw.

Claim 136 (Canceled) A system according to Claim 134 wherein the releasable connection is releasable by being cut and wherein the apparatus for releasing the releasable connection comprises apparatus for cutting the releasable connection.

Claim 137 (Canceled) A system according to Claim 134 wherein the releasable connection is releasable in response to an electrical discharge and wherein the apparatus for releasing the releasable connection comprises apparatus to delivering an electrical discharge.

Claim 138 (Canceled) A method for treating a mammalian patient who has a defect in the wall of a blood vessel that has a lumen and a wall, said method comprising the steps of:

- A. providing a system which comprises; i) a delivery catheter that has a distal end, a lumen that extends longitudinally therethrough and terminates in a distal end opening, ii) an intravascular member which has a collapsed configuration and an expanded configuration wherein it assumes a generally tubular configuration defining a flow channel therethrough, said intravascular member being disposed within the lumen of the delivery catheter while in its collapsed configuration and iii) an advancer apparatus for advancing the intravascular member out of the distal end opening lumen of the third catheter, said intravascular member being connected to the advancer apparatus by way of a releasable connection;

- B. positioning the delivery catheter within the blood vessel such that its distal end opening is near the defect in the wall of the blood vessel;
- D. using the advancer apparatus to advance the intravascular member out of the distal end opening of the delivery catheter such that the intravascular member will transition to its expanded configuration within the blood vessel lumen adjacent to the defect and engage the wall of the blood vessel so as to be held in substantially fixed position within the vessel lumen adjacent to the vessel wall defect and so that blood flows through the flow channel of the intravascular member when it is positioned in the blood vessel; and,
- D. releasing the releasable connection and removing the delivery catheter, thereby leaving the expanded intravascular member implanted within the blood vessel lumen adjacent to the defect.

Claim 139 (Canceled) A method according to Claim 138 wherein the performance of Steps B and C comprises:

placing a first catheter at a first position within the patient's vasculature;

advancing a second catheter through the lumen of the first catheter and to a second position within the patient's vasculature;

advancing the delivery catheter through the lumen of the second catheter to a third position within the patient's vasculature adjacent the vessel wall defect; and

while the first, second and third catheters are in their respective first, second and third positions, advancing the intravascular member out of the lumen of the third catheter such that the intravascular member assumes its radially expanded configuration.

Claim 140 (Canceled) A method according to Claim 138 further comprising the steps of:

- E. providing an embolus member sized to fit within the vessel wall defect; and,
- F. positioning the embolus member within the vessel wall defect such that the intravascular member retains the embolus member within the vessel wall defect.

Claim 141 (Canceled) A method according to Claim 140 wherein Step F is performed after Step C.

Claim 142 (Canceled) A method according to Claim 140 wherein Step F is performed before Step C.

Claim 143 (Canceled) A method according to Claim 141 wherein Step F comprises:

- i positioning a delivery catheter having a distal end within the intravascular member after it has been radially expanded in Step E;
- ii causing the distal end of the delivery catheter to advance through a portion of the intravascular member and into the vessel wall defect;
- iii delivering the embolus member out of the distal end of the delivery catheter and into the vessel wall defect; and,
- iv removing the delivery catheter, leaving the embolus member within the vessel wall defect with the intravascular member preventing the embolus member from escaping from the vessel wall defect into the lumen of the blood vessel.

Claim 144 (Canceled) A method according to Claim 140 wherein the vessel wall defect is an aneurysm and wherein Step F comprises positioning the embolus member within the aneurysm.

Claim 145 (Canceled) A method according to Claim 144 wherein the aneurysm is a wide mouthed aneurysm and wherein Step F comprises delivering the embolus member through the mouth of the aneurysm and into the aneurysm sac.

Claim 146. (Canceled) A method according to Claim 140 wherein the embolic member delivered in Step F comprises a thrombogenic member.

Claim 147. (Previously Added) A method for treating a mammalian patient who has a defect in the wall of a blood vessel that has a true lumen and a wall, said method comprising the steps of:

A. providing a system that comprises; i) a delivery catheter; ii) an intravascular member that assumes a collapsed configuration when positioned within the delivery catheter and an expanded configuration when advanced out of the delivery catheter ~~that has a collapsed configuration wherein it is positionable within the delivery catheter and an expanded configuration a it is generally tubular in configuration and defines a hollow flow channel therethrough,~~ and iii) an advancer for advancing the intravascular member out of the delivery catheter,

said intravascular member being connected to the advancer by way of a releasable connection, said releasable connection being volitionally releasable without requiring rotation of the advancer;

said intravascular member being in the form of an elongate strand when in its collapsed configuration; and

said elongate strand assuming a generally tubular shape having a hollow flow channel therethrough when the intravascular member is in its expanded configuration;

B. positioning the delivery catheter within the true lumen of the blood vessel near the defect;

C. using the advancer apparatus to advance the intravascular member out of the delivery catheter and causing the intravascular member to transition to its expanded configuration within the true lumen of the blood vessel, adjacent to the defect, such that, i) the intravascular member engages the wall of the blood vessel so as to be held in substantially fixed position within the true lumen of the blood vessel, ii) no substantial portion of the intravascular member extends into the defect and iii) blood flowing through the true lumen of the blood vessel lumen passes through the flow channel of the intravascular member; and,

D. releasing the releasable connection and removing the delivery catheter, thereby leaving the expanded intravascular member implanted within the true lumen of the blood vessel adjacent to the defect;

E. providing an embolus member sized to fit within the vessel wall defect; and,

F. positioning the embolus member within the vessel wall defect such that the intravascular member retains the embolus member within the vessel wall defect.

Claim 148 (Previously Added) A method according to Claim 147 wherein the performance of Steps B and C comprises:

placing a first catheter at a first position within the patient's vasculature;

advancing a second catheter through the lumen of the first catheter and to a second position within the patient's vasculature;

advancing the delivery catheter through the lumen of the second catheter to a third position within the true lumen of the blood vessel, adjacent to the vessel wall defect; and



while the first, second and third catheters are in their respective first, second and third positions, advancing the intravascular member out of the lumen of the third catheter such that the intravascular member assumes its expanded configuration within the true lumen of the blood vessel.

Claim 149 (Cancelled) A method according to Claim 147 further comprising the steps of:

E. providing an embolus member sized to fit within the vessel wall defect; and,

F. positioning the embolus member within the vessel wall defect such that the intravascular member retains the embolus member within the vessel wall defect.

Claim 150 (Amended) A method according to Claim ~~149~~ 147 wherein Step F is performed after Step C.

Claim 151 (Amended) A method according to Claim ~~149~~ 147 wherein Step F is performed before Step C.

Claim 152 (Amended) A method according to Claim ~~149~~ 147 wherein Step F comprises:

- i positioning a delivery catheter having a distal end within the intravascular member after completion of Step C;
- ii causing the distal end of the delivery catheter to advance through a portion of the intravascular member and into the vessel wall defect;
- iii delivering the embolus member out of the distal end of the delivery catheter and into the vessel wall defect; and,
- iv removing the delivery catheter, leaving the embolus member within the vessel wall defect with the intravascular member preventing the embolus member from escaping from the vessel wall defect into the lumen of the blood vessel.

Claim 153 (Amended) A method according to Claim ~~152~~ 147 wherein the vessel wall defect is an aneurysm and wherein Step F comprises positioning the embolus member within the interior of the aneurysm and outside of the true lumen of the blood vessel.

Claim 154 (Amended) A method according to Claim ~~152~~ 147 wherein the aneurysm is a wide mouthed aneurysm and wherein Step F comprises delivering the embolus member through the mouth of the aneurysm and into the aneurysm sac.

Claim 155 (Amended) A method according to Claim ~~152~~ 147 wherein at least a portion of the embolic member delivered in Step F is thrombogenic.

Claim 156 (Amended) A system for treating an aneurysm or other defect in the wall ~~implantation of an intravascular member within the true lumen~~ of a blood vessel that has a wall and a true lumen through which blood normally flows, said system comprising:

an elongate, flexible delivery catheter having a lumen extending longitudinally therethrough and a distal end opening, said delivery catheter being advanceable in to the true lumen of a blood vessel ~~wherein the intravascular member is to be implanted;~~

an intravascular member that has a collapsed configuration wherein it is in the form of an elongate strand member that is positionable within the delivery catheter and an expanded configuration wherein it is the elongate strand member assumes a generally tubular shape that in configuration ~~and~~ defines a hollow flow channel therethrough, and

an advancer for advancing the intravascular member out of the delivery catheter, said intravascular member being connected to the advancer by way of a releasable connection, said releasable connection being volitionally releasable without requiring rotation of the advancer; and

an embolic member that is implantable within the aneurysm or other defect in the wall of the blood vessel;

said advancer being useable to advance the intravascular member out of the distal end opening of the delivery catheter such that the intravascular member expands to its expanded configuration within the true lumen of the blood vessel in an orientation that is substantially coaxial with the advancer and such that blood flowing through the blood vessel lumen will flow through the flow channel of the intravascular member, while the intravascular member remains connected to the advancer apparatus by way of said releasable connection;

said releasable connection being thereafter volitionally severable such that the delivery catheter and advancer apparatus may be removed from the blood vessel lumen leaving the expanded intravascular member implanted in said blood vessel lumen;

said embolic member being implantable within the aneurysm or other defect such that the intravascular member prevents the embolic member from escaping from the aneurysm or other defect and into the true lumen of the blood vessel.

Claim 157 (Cancelled) A system according to Claim 156 wherein the intravascular member comprises a strand that is substantially linear when said collapsed configuration and substantially curvilinear when in said expanded configuration.

Claim 158 (Amended) A system according to Claim 157 wherein the elongate strand member forms [[a]] at least one helix when in said expanded configuration.

Claim 159 (Previously Added) A system according to Claim 156 further comprising apparatus for releasing the releasable connection.

Claim 160 (Cancelled) A system according to Claim 156 wherein the releasable connection comprises a ball and claw.

Claim 161 (Cancelled) A system according to Claim 156 wherein the releasable connection is releasable by being cut and wherein the apparatus for releasing the releasable connection comprises apparatus for cutting the releasable connection.

Claim 162 (Amended) A system according to Claim 156 wherein the releasable connection is releasable in response to an electrical current ~~and wherein the apparatus for releasing the releasable connection comprises apparatus for delivering electrical current.~~

Claim 163 (New) A method according to Claim 147 wherein, after the intravascular member has been advanced out of the catheter and deployed in its expanded configuration, the intravascular member is retractable back to its collapsed configuration within the catheter until such time as the releasable connection has been volitionally released.

Claim 164 (New) A method according to Claim 163 further comprising the step of:  
after the intravascular member has been advanced out of the catheter and deployed in its expanded configuration but before volitionally releasing the releasable connection, retracting the intravascular member back to its collapsed configuration within the catheter.

**Claim 165 (New)** A system according to Claim 156 wherein, after the intravascular member has been advanced out of the catheter and deployed in its expanded configuration, the intravascular member is retractable back to its collapsed configuration within the catheter until such time as the releasable connection has been volitionally released.